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A Revision of the South American Spider Genus *Trachelopachys* (Araneae, Clubionidae)

NORMAN I. PLATNICK[1]

ABSTRACT

The South American spider genus *Trachelopachys* is redefined on the basis of genitalic characters; the 11 known species are diagnosed, described, and assigned to species groups. A proposal to unite the tracheline, castianeirine, and corinnine clubionids in a separate family, Corinnidae, is rejected; two characters used to support this grouping (the purported absence of dorsal tarsal trichobothria and of feathery setae) are shown to be invalid, and the genitalic similarities between the trachelines and castianeirines are considered symplesiomorphic. A cladistic analysis of the known *Trachelopachys* is presented, and an attempt made to correlate the inferred branching sequence with the geographical distribution of the species. Four new species are described: *T. tarma* and *T. machupicchu* from Peru, *T. magdalena* from Colombia, and *T. ignacio* from Paraguay. *Trachelopachys albicans* Mello-Leitão is newly synonymized with *T. cingulipes* (Simon). The male of *T. bicolor* Chamberlin and the females of *T. sericeus* (Simon), *T. bidentatus* Tullgren, and *T. gracilis* (Keyserling) are described for the first time. *Trachelopachys fasciatus* Mello-Leitão, *T. gulosus* Mello-Leitão, and *T. segmentatus* Mello-Leitão are transferred to *Trachelas*; *Trachelas keyserlingi* Roewer and *Trachelas gracilis* Keyserling are transferred to *Trachelopachys*. In a supplement, the genus *Tetratrachelas* Caporiacco is newly synonymized with *Trachelopachys*, and *Meriola discolorifemur* Caporiacco is transferred to *Trachelopachys* and newly synonymized with *T. singularis* (Caporiacco).

INTRODUCTION

The present paper, the third in a series on the tracheline genera of the spider family Clubionidae and the first of several that will focus on the South American fauna, is concerned with the genus *Trachelopachys*. The South American trachelines are very poorly known; about 50 species have been described, mostly from single specimens, and few of the species have ever been mentioned in the literature since their original descriptions. Most of these species have been placed in the large, widespread genus *Trachelas* but several smaller genera, including some that are monotypic, have been described. As the real limits of *Trachelas* are not yet known, it has seemed best to work out the smaller genera first, even though some species belonging to them may be currently misplaced in *Trachelas* and some name changes may be necessary when that genus is revised.

Trachelopachys, apparently the largest of the

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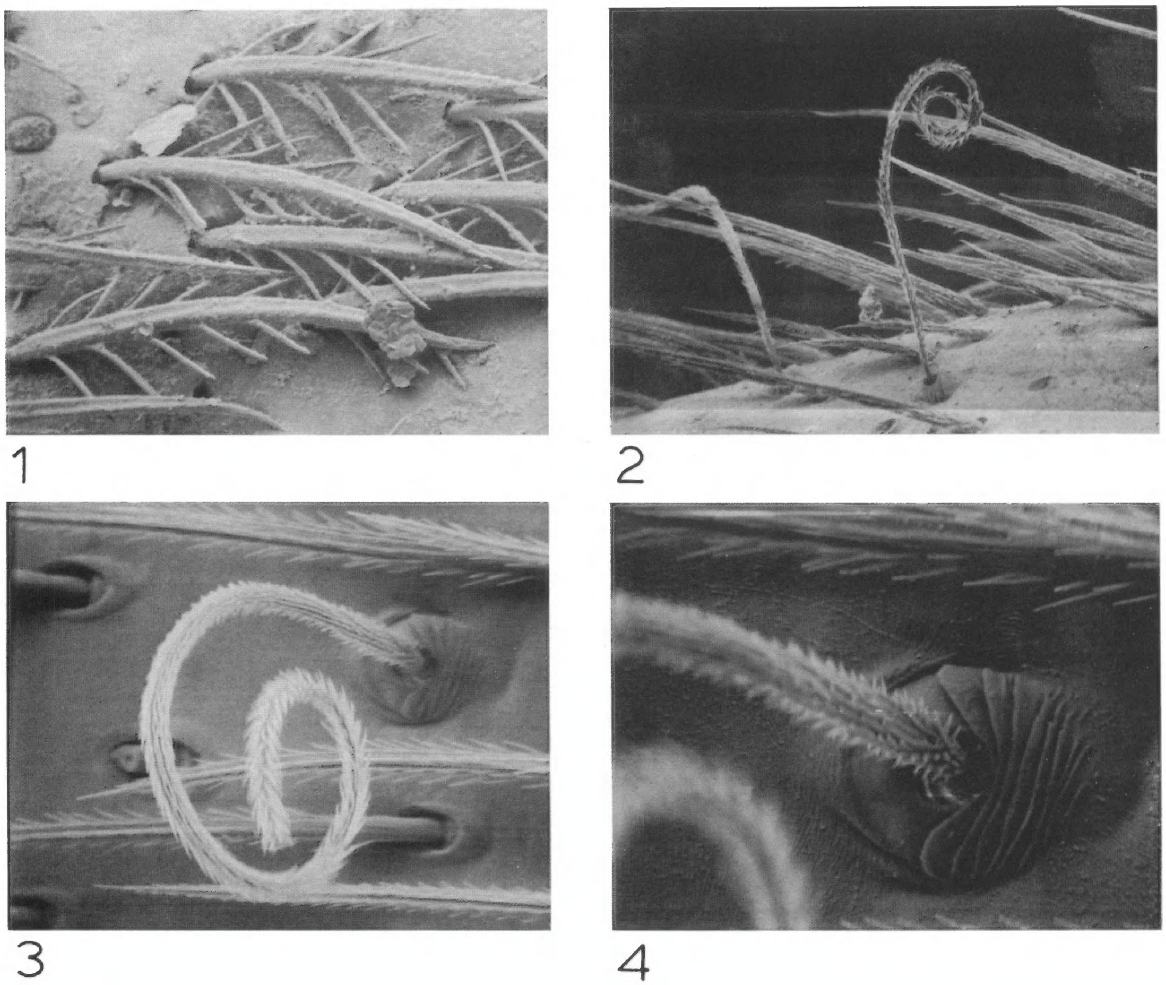
smaller genera, is also one of the most distinctive. The genus includes the largest American trachelines, and all the species are strikingly colored. In life, the reddish orange legs contrast strongly with a very dark, often jet-black carapace. In addition, most species have parts of some leg segments strongly marked with dark bands, often in a species-specific pattern. Unfortunately, the reddish colors wash out rapidly in alcohol, and all preserved specimens have yellow legs; similarly, the dark leg bands and the carapace bleach with age, and some specimens collected in the last century show only the faintest traces of the leg bands. *Trachelopachys* can also be recognized by their genitalia; both the coiled duct and retrolaterally directed embolus of the male palp (fig. 12) and the presence of a basal spermathecal lobe in females (fig. 15) are distinctive.

The known *Trachelopachys* fall into two species groups on the basis of genitalic structure. In the *sericeus* group (*T. sericeus*, *T. cingulipes*, *T. tarma*, *T. machupicchu*, and *T. bidentatus*) the retrolateral tibial apophysis is situated at the tip of the tibia (fig. 13) and the anterior epigynal margin is relatively broad (fig. 14), whereas in the *keyserlingi* group (*T. keyserlingi*, *T. gracilis*, *T. aemulatus*, *T. magdalena*, *T. bicolor*, and *T. ignacio*) the retrolateral tibial apophysis is situated below the tip of the tibia (fig. 34) and the anterior epigynal margin is relatively narrow (fig. 36). Both species groups are widely distributed in South America.

Macrotaxonomy. In an earlier paper in this series (Platnick and Shadab, 1974) the tracheline clubionids were characterized by the complete absence of leg spines and the presence, at least in males, of ventral cusps on the distal segments of the anterior legs. Since that time I have seen specimens of as yet undetermined South American trachelines in which neither sex has leg cusps; it is apparent that these cusps have been gradually lost in some lineages, and that the concept of the group should be broadened. So far as I am aware, the trachelines are the only clubionids that lack leg spines, and this apomorphic character, along with the heavily sclerotized cephalothorax and comparatively simple genitalia, allows unambiguous definition of the group.

Traditionally, the trachelines have been placed in the Corinninae on the basis of the indistinct, short second segment of their posterior spinnerets, even though *Corinna* and its relatives have numerous heavy leg spines and vastly more complex genitalia. Lehtinen (1967) enlarged the concept of the group to include the castianeirines as well, and proposed, as part of a solution to the obvious heterogeneity of the Clubionidae, removing all three groups to a separate family Corinnidae. Two of the characters used to support this grouping, however, are invalid. Lehtinen (1967, p. 292) claimed that the enlarged group "is characterized by the lack of distinct tarsal trichobothria." The tarsal trichobothria of spiders are easy to locate with the scanning electron microscope; their tips tend to curl during the coating process (figs. 2, 3) and their bases have a characteristic structure very different from that of the ordinary leg setae (fig. 4). As can be seen from figures 5-8, corinnines, castianeirines, and trachelines all have dorsal tarsal trichobothria. In addition to lumping all three groups in the Corinnidae, Lehtinen transferred the family to his branch Zodariides (far from the Clubionidae in his system), claiming (1967, p. 292) that "feathery hairs are totally lacking in all known evolutionary lines of Zodariides." Reiskind (1969) pointed out that feathery setae occur in castianeirines, and a scanning electron micrograph (fig. 1) of feathery setae from the abdomen of *Castianeira trilineata* confirms this.

One character, the heavy somatic sclerotization, does support the expanded grouping, but as pointed out elsewhere (Platnick, 1975a) this heavy sclerotization occurs in such a wide variety of spider families of obviously separate lineages that it must have arisen many times and is therefore of little value for macrotaxonomy. Similarly, association of the castianeirines with the trachelines is supported by the genitalic similarities between the two groups. The palp of *Castianeira*, for example, can be derived by simply elongating the distal half of a *Trachelas* palp; this palpal elongation is obviously correlated with the general somatic elongation of castianeirines associated with their ant-mimicking habits. However, these palpi, with their terminal embolus, a tegulum containing a duct, and a hematodocha, are actually the simplest (and



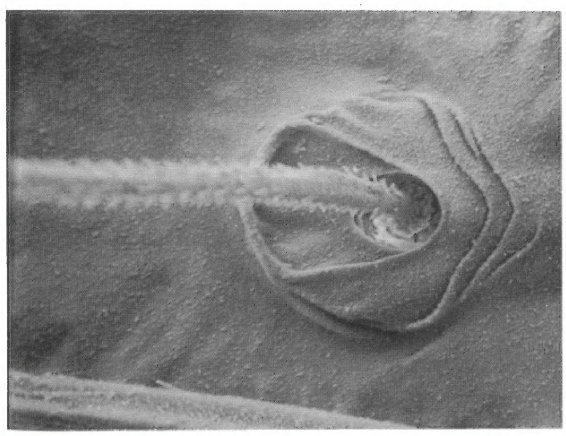
FIGS. 1-4. Scanning electron micrographs. 1. *Castianeira trilineata*, feathery setae on male abdomen, dorsal view, 675×. 2-4. Tarsal trichobothria from tarsi I of females, dorsal views. 2. *Clubiona obesa*, 650×. 3. *Strotarchus piscatorius*, 1300×. 4. *Strotarchus piscatorius*, 2600×.

presumably most primitive) possible forms of the entelegyne palpus, and these genitalic similarities must therefore be considered symplesiomorphic.

It seems unlikely then that either the castianeirines or the corinnines are the sister group of the trachelines. What the sister group actually is remains unknown; the Australian genus *Lampona* and its relatives may be good candidates. *Lampona* has always been placed in the Gnaphosidae because of its separated anterior spinnerets, but the tracheline-like absence of leg spines, heavy somatic sclerotization, and genitalia are characters found in no other gnaphosids and clearly exclude the genus from that family.

In short, Lehtinen's attempt to resolve the heterogeneity (and presumed, but not finally demonstrated, polyphyly) of the classical family Clubionidae does not significantly improve the classification of the groups considered above. As more clubionid genera are studied, the family will probably be broken down into a large number of relatively distinct subfamilies. The relationships of these subfamilies are likely to remain unknown until the world fauna is revised; meanwhile, little is gained by elevating these distinct but small groups to family status, and it seems best to continue the usage of Clubionidae.

Phylogeny. The present study, like one of



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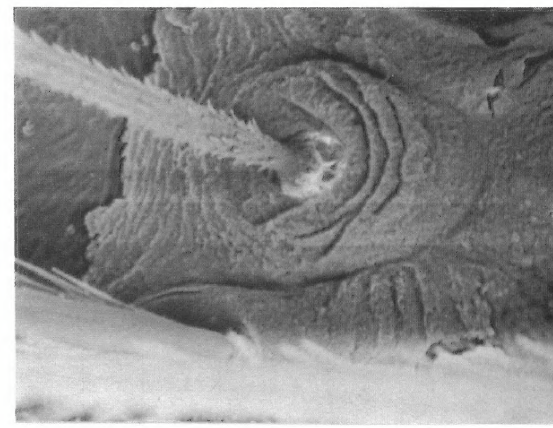

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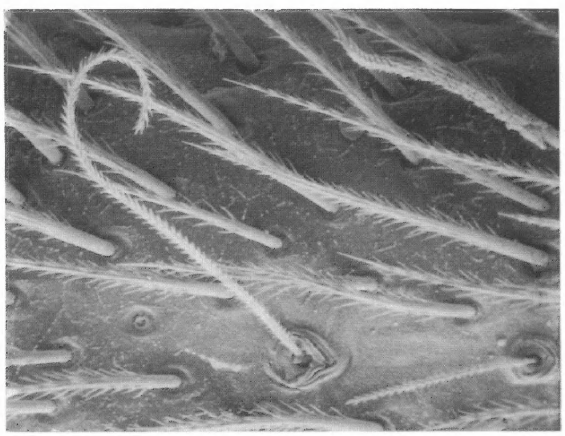

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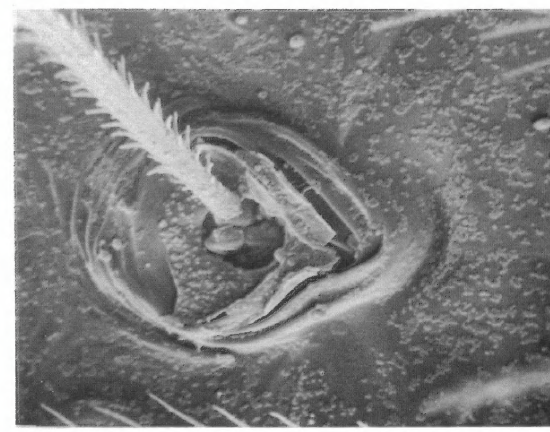

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FIGS. 5-8. Scanning electron micrographs, tarsal trichobothria from tarsi I of females, dorsal views. 5. *Corinna bicalcarata*, 2600X. 6. *Castianeira descripta*, 2600X. 7. *Trachelas mexicanus*, 650X. 8. *Trachelas mexicanus*, 2600X.

Callilepis (Platnick, 1975b), represents an attempt to apply the cladistic methods developed by Hennig (1966) and best expressed by Brundin (1966) to a spider genus which is being revised on a worldwide basis. Some of the strengths and weaknesses of this methodology encountered in these attempts should be mentioned, if only to insure that unwarranted conclusions are not drawn from the dendrogram and maps presented.

With the notable exception of Carico's work on the Pisauridae (1973a, 1973b), hardly a single modern revisionary study of a spider group has included a dendrogram; most arachnologists have seemingly found it difficult or impossible to produce phylogenies by the methods of traditional "evolutionary" systematics. This difficulty is probably due in part to the regrettable fact that few workers have looked at a group of any size on a worldwide basis and that most have therefore been reluctant to engage in phylogenetic speculation, but the natures of spider taxonomy and of "evolutionary" systematics may be deeper reasons. In groups like higher spiders, where generally the only significant interspecific differences within a species group are found in the genitalia, it is obvious that any consideration of phylogeny on the species level must be primarily dependent on genitalic characters. The

secondary genitalia of higher spiders are generally so complex and such sensitive indicators of speciation and relationship that they provide almost an overabundance of information on phylogeny. The methods of "evolutionary" systematics, which depend on a more or less intuitive assessment of overall similarities between groups, cannot cope with this abundance of information. If in a given spider genus the male palp has just five sclerites that can vary in different ways in each of, say 10 species, the number of combinations to be dealt with is already beyond that on which an intuitive assessment can be based, and the females have not even been considered yet. The prime advantage of cladistic analysis in spiders is that the search for sister groups based on synapomorphic characters makes it possible to start with individual extant species and work up (backward in time) to larger groups.

There are two difficulties involved in applying this methodology to spider systematics. First, if some species are known from only one sex, information which may be crucial to the construction of a cladogram may be unavailable. In practice this disadvantage can usually be overcome, as the genitalia of even one sex will provide enough information to establish sister group relationships. For example, of four species of *Trachelopachys* known from only one sex, three could be placed without difficulty as sister species of forms known from both sexes, and each species pair treated as a single entity on the basis of the better known species. In one case, however, it was necessary to make a prediction, on the basis of the degree of morphological differences shown by the females, as to the type of palp which an unknown male would be likely to have. That section of the cladogram (involving *T. aemulatus*, *T. keyserlingi*, and *T. gracilis*) is therefore much less reliable than the remainder. The second difficulty encountered is that in the absence of fossils (the usual case of spiders) the placement of specific character states as primitive or derived is always open to question. Of the criteria used to make these judgments regarding the characters of *Trachelopachys* listed in table 1, three seem to merit relatively high degrees of confidence: character states shared with the closest relative of the genus (*Trachelas*) are presumed primitive (characters 1, 2, 5, 6, 7, 11, 12, 18 and 19); the morphologically more complex state is presumed derived (characters 4, 5, 7, 10, 14, 18, and 19); and character states restricted to a single species within the genus are presumed derived (characters 3, 13, 15, and 16). A fourth criterion, that character states restricted to a single species within a species group are presumed derived (characters 8, 9, 17, and 20), seems less reliable, as it is certainly possible, although probably not common, for a single species within a species group to retain a primitive character state while all the other species in the group display the derived state of that character. That some of these decisions on whether particular character states are primitive or derived may be questioned by later workers, and that additional evidence may require changes in the cladogram, seems the best argument in favor of the cladistic method. In fact, it is just this arguability that puts phylogenetic reconstruction in the realm of science. Since the dendrogram of an "evolutionary" systematist represents only an intuitive assessment of relationships, it cannot be argued with (only an alternative intuitive assessment can be offered), and thus it does not represent a scientific hypothesis. It is only by the specification of actual characters supporting each branching point in a dendrogram that such a reconstruction becomes an arguable hypothesis.

Biogeography. One of the most common problems confronting arachnologists is that of correctly matching males and females known only from allopatric population samples. Some workers, notably the late Dr. A. M. Chickering, have been so fearful of mismatching sexes that they have routinely described each sex as a different species wherever a possibility of confusion existed. This practice seems discordant with the law of parsimony; certainly, to maintain that there are five species of a genus in a given area is a simpler hypothesis than to assume that there are 10 species in each of which one sex has never been collected. Cladistic analysis provides a methodology for overcoming this problem. For example, *Trachelopachys keyserlingi* is a species known from both sexes, and is widely distributed in Argentina, Paraguay, and Rio Grande do Sul, Brazil (fig. 11). A single male of another species from Santa Catarina, Brazil,

TABLE 1
Genitalic Characters Used in Figure 9

Character	Primitive State	Derived State
1. Anterior epigynal margin	Narrow	Broad
2. Retrolateral tibial apophysis	At tip of tibia	Below tip of tibia
3. Anterior epigynal margin	Straight, unbroken	Curved or broken medially
4. Epigynal septum	Absent	Present
5. Embolus	Entire	Bifid
6. Palpal duct	Unexpanded prolaterally	Expanded prolaterally
7. Retrolateral tibial apophysis	Short	Long
8. Conductor	Broad	Narrow
9. Proximal loop of palpal duct	Visible in ventral view	Not visible in ventral view
10. Conductor	Rounded distally	Pointed distally
11. Epigynal openings	Situated basally	Situated anteriorly
12. Retrolateral tibial apophysis	Pointed	Rounded
13. Anterior epigynal margin	Separated from openings	Connected to openings
14. Basal lobes of spermathecae	Short	Long
15. Anterior epigynal margin	Gently curved	Acutely bent
16. Basal lobes of spermathecae	Widest at tip	Widest behind tip
17. Epigynal openings	Slitlike	Circular
18. Tip of embolus	Unknown; presumed straight	Recurved
19. Embolus	Narrow	Broad
20. Lateral epigynal margins	Short	Long

has an embolus with a recurved tip, an apomorphic character shared only with the male of *T. keyserlingi.* On the basis of epigynal structure, a female from Bahia, Brazil, seems to be the sister form of the female of *T. keyserlingi.* Thus, although it is possible that the two single specimens belong to different species, the most parsimonious solution is to consider them conspecific until additional evidence indicates otherwise.

If the vast majority of speciation events conform to the model of allopatric speciation, if our phylogenies reflect actual evolutionary history, and if subsequent environmental factors (including alterations caused by man) have not grossly distorted the distribution patterns established at the time of the most recent speciation event in a group, we should be able to correlate the inferred branching sequence in time with the present distribution of species (and larger groups) in space. Figures 10 and 11 represent efforts to superimpose the cladograms derived from the information presented in table 1 and figure 9 on the known distributions in the two species groups of *Trachelopachys.* It must be stressed that the starting point of the cladograms on the maps and the placement of the inferred ancestral species do not represent speculations on their actual locations in space; their placement is merely an artifact of the necessary distortion of the cladogram. Similarly, the directional arrows do not represent speculations on actual dispersal routes or even that such dispersal has occurred; each branching point may represent vicariance (division of the range of an ancestral species by the appearance of some barrier) rather than dispersal.

ACKNOWLEDGMENTS

I thank first Drs. P. Wygodzinsky and R. T. Schuh of the American Musuem of Natural History for their assistance with South American correspondence, literature, and localities, and for helpful criticisms of a draft of the Introduction. I am deeply indebted to all the curators listed below, but thank especially Dr. Kronestedt for locating Tullgren's Patagonian specimens of *T. sericeus*, without which the identity of the type species of *Trachelopachys* would have remained uncertain, and Dr. Hubert for sorting out several crucial undetermined specimens from the Simon

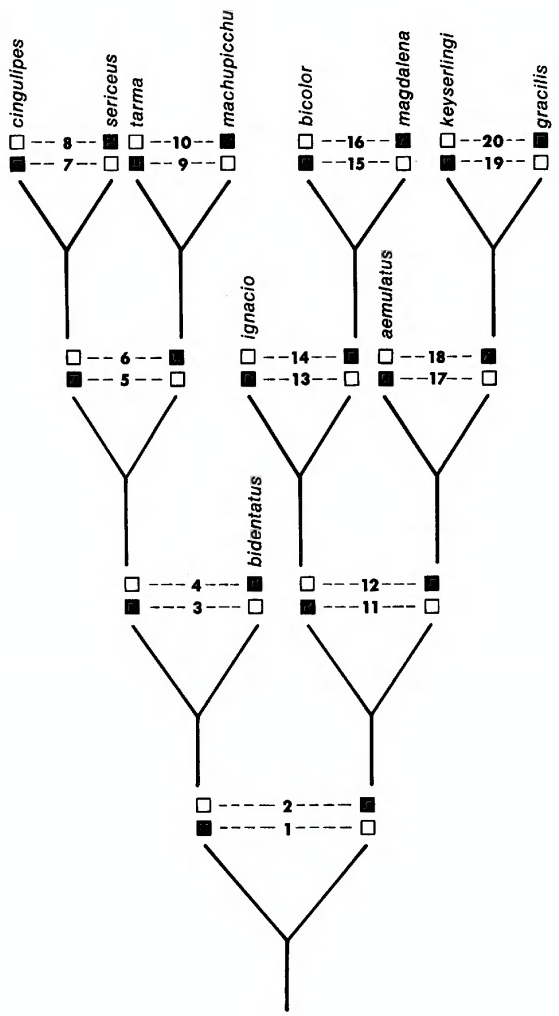


FIG. 9. Dendrogram of *Trachelopachys* species. Numbers refer to the characters listed in table 1. Dark squares denote derived character states, light squares primitive states. Vertical axis reflects inferred branching sequence only, not evolutionary history in time.

collection. The scanning electron micrographs were obtained with the help of Mr. R. J. Koestler of the American Museum of Natural History. The illustrations are the work of Ms. Amelia Lau, Ms. Nancy Delach, and Dr. Mohammad U. Shadab.

ABBREVIATIONS

AMNH, the American Museum of Natural History
BMNH, British Museum (Natural History), Mr. F. R. Wanless
CAS, California Academy of Sciences, Dr. R. X. Schick
EPC, Exline-Peck Collection, Dr. W. B. Peck
MACN, Museo Argentino de Ciencias Naturales, Drs. R. D. Schiapelli and B. S. Gerschman de Pikelin
MCZ, Museum of Comparative Zoology, Dr. H. W. Levi
MLP, Museo de La Plata, Dr. O. M. Blanco
MNHN, Muséum National d'Histoire Naturelle, Dr. M. Hubert
NRS, Naturhistoriska Riksmuseet, Dr. T. Kronestedt

Standard abbreviations of morphological terms and the format of the descriptions follow those used in Platnick and Shadab (1975).

TRACHELOPACHYS SIMON

Trachelopachys Simon, 1897, p. 185 (type species by original designation *Trachelas sericeus* Simon). Roewer, 1954, p. 590. Bonnet, 1959, p. 4673.

Diagnosis. *Trachelopachys* is closest to *Trachelas* but may be distinguished by the darker carapace, the S-shaped tegular duct and retrolaterally directed embolus of the male palp (fig. 12), and the presence of a basal spermathecal lobe in females (fig. 14).

Description. Total length 4.2-8.5 mm. Carapace almost circular in dorsal view, widest at coxae II, tuberculate, dark reddish brown to jet-black, with ocular area abruptly narrowed, recurved border along posterior margin, and recumbent white and erect black setae. Cephalic area gradually elevated; thoracic groove longitudinal, depressed. Clypeal height equal to roughly twice the anterior median eye diameter. Anterior eye row slightly procurved, posterior row slightly recurved (from front). All eyes circular; anterior medians diurnal, others nocturnal, with canoe-shaped tapetum; eyes subequal in size. Anterior median eyes separated by roughly their diameter, by less than their diameter from anterior laterals. Eyes of posterior row separated by roughly twice their diameter. Lateral eyes of each side separated by more than twice their diameter. Median ocular quadrangle roughly square. Mouthparts and sternum dark

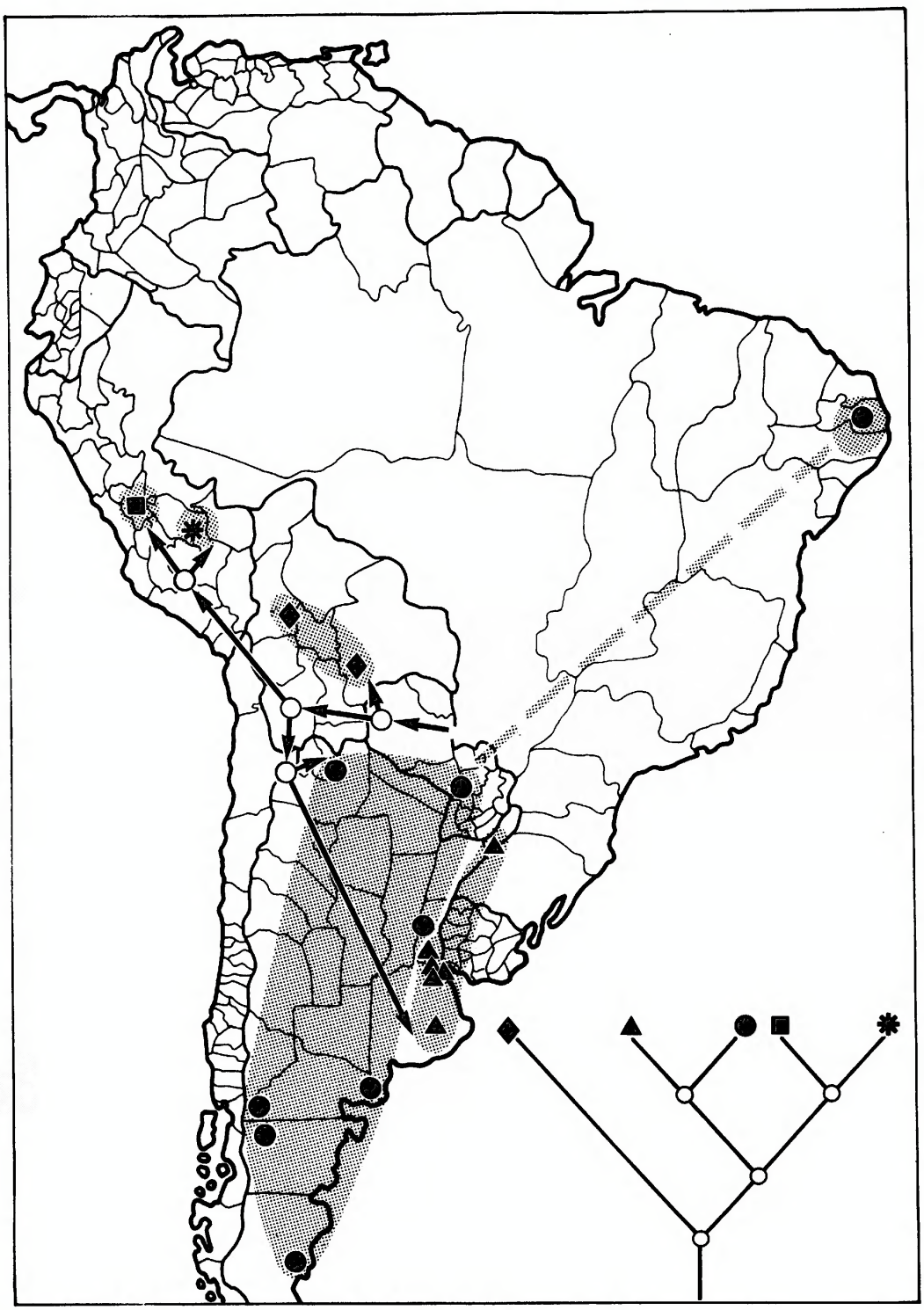


FIG. 10. Cladogram of the *sericeus* group of *Trachelopachys* (lower right), superimposed on map of South America showing distributions of *T. sericeus* (circles), *T. cingulipes* (triangles), *T. tarma* (squares), *T. machupicchu* (asterisks), and *T. bidentatus* (diamonds). Interrupted shading separates the probably disjunct populations of *T. sericeus*. See text for explanation.

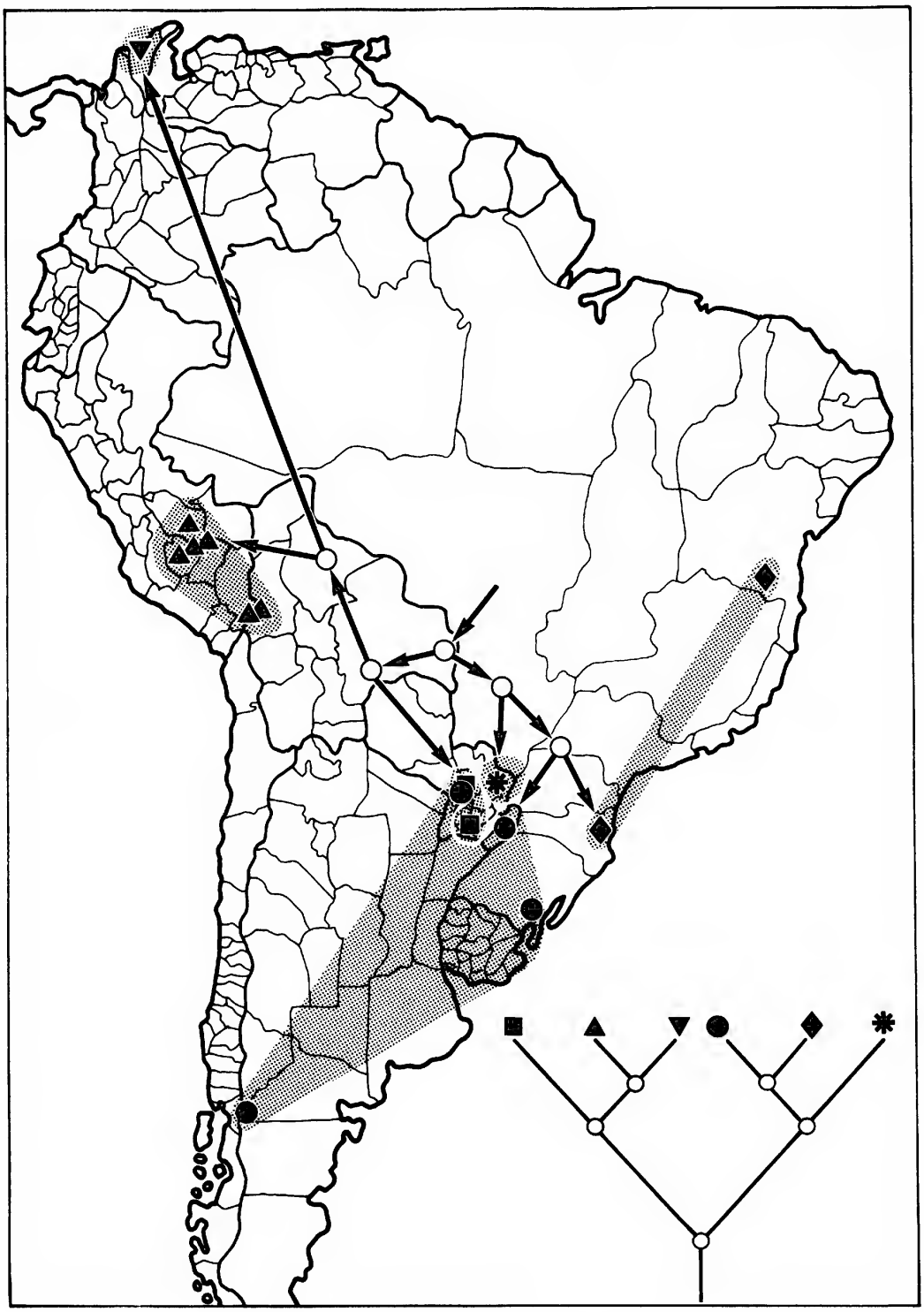


FIG. 11. Cladogram of the *keyserlingi* group of *Trachelopachys* (lower right), superimposed on map of South America showing distributions of *T. keyserlingi* (circles), *T. gracilis* (diamonds), *T. aemulatus* (asterisks), *T. magdalena* (inverted triangles), *T. bicolor* (upright triangles), and *T. ignacio* (squares). See text for explanation.

brown; endites slightly convergent; labium broadly triangular; sternum not extended between coxae. Abdomen dark gray dorsally, lighter ventrally, with four dark dorsal muscle impressions and four longitudinal rows of circular sclerotizations ventrally. Six spinnerets, no colulus. Leg formula 4123; leg spines completely lacking. Portions of reddish orange proximal leg segments often with dark bands. Tarsi with two dentate claws and claw tufts; trochanters unnotched; metatarsi III and IV with preening comb. Metatarsi I and II and all tarsi with ventral scopulae; metatarsi and tarsi with dorsal trichobothria. Tibiae, metatarsi, and tarsi of anterior legs often with ventral cusps. Male palp with medially or distally situated retrolateral tibial apophysis (sometimes shifted dorsally), rounded tegulum with S-shaped duct, retrolaterally directed embolus, and wide to narrow conductor at tip of tegulum (figs. 12, 13). Epigynum with narrow to broad anterior margin and median or posterior openings (fig. 14). Spermathecae with distinct basal lobes (fig. 15).

Misplaced Species. The types of *Trachelopachys gulosus* Mello-Leitão (1940), *T. fasciatus* Mello-Leitão (1941), and *T. segmentatus* Mello-Leitão (1942) all have a chevron pattern on the abdomen and genitalia that exclude them from *Trachelopachys* as defined above; these species are here transferred to *Trachelas* and will be redescribed in a later paper.

Simon (1897) transferred *Chiracanthium abnormis* Holmberg (1881) to *Trachelopachys*; Holmberg's types are destroyed (Levi, 1964), and no specimens of this species are among the specimens Holmberg sent to Keyserling, which are now housed in BMNH and represent the only extant Holmberg material. As both Holmberg's description and illustration indicate that *Chiracanthium abnormis* has an abdominal chevron pattern, the species cannot belong to *Trachelopachys* and is here considered a *nomen dubium.*

Uncertain Name. Simon (1897) synonymized *Clubiona obliterata* Nicolet (1849) and *Clubiona ultima* Nicolet (1849) with *Clubiona macrocephalus* Nicolet (1849) and transferred that species to *Trachelopachys*; all these species are from the environs of Santiago, Chile. Nicolet's specimens may be in MNHN but are unavailable. There is nothing in Nicolet's descriptions that definitely excludes the species from *Trachelopachys*, but although reasonably large collections of Chilean trachelines have been available for study, no *Trachelopachys* are included. As the name has been used in a recent faunistic study (Zapfe-Mann, 1974), the status of this species remains uncertain.

KEY TO SPECIES OF *TRACHELOPACHYS*

1. Males 2
   Females 10
2. Two retrolateral tibial apophyses, one situated proximally to distal apophysis (Tullgren, 1905, fig. 23a; no specimens seen) . . . . . *bidentatus*
   One retrolateral tibial apophysis 3
3. Retrolateral tibial apophysis situated at tip of tibia (figs. 13, 23, 27, 31) 4
   Retrolateral tibial apophysis situated below tip of tibia (figs. 35, 39, 47, 51) 7
4. Embolus bifid (figs. 12, 22) 5
   Embolus entire (figs. 26, 30) 6
5. Proximal flange of embolus shorter than distal flange (figs. 12, 16) . . . . . *sericeus*
   Proximal flange of embolus longer than distal flange (fig. 22) . . . . . *cingulipes*
6. Retrolateral tibial apophysis relatively short (fig. 27); basal loop of palpal duct not visible ventrally (fig. 26) . . . . . *tarma*
   Retrolateral tibial apophysis relatively long (fig. 31); basal loop of palpal duct visible ventrally (fig. 30) . . . . . *machupicchu*
7. Conductor relatively narrow; tip of embolus recurved (figs. 34, 38) 8
   Conductor relatively wide; tip of embolus not recurved (figs. 46, 50) 9
8. Embolus relatively wide (fig. 34) . . . . . *keyserlingi*
   Embolus relatively narrow (fig. 38) . . *gracilis*
9. Retrolateral tibial apophysis closer to middle of tibia than to tip of tibia (fig. 51) . . . . . *ignacio*
   Retrolateral tibial apophysis closer to tip of tibia than to middle of tibia (fig. 47) . . . . . *bicolor*
10. Anterior epigynal margin relatively wide (figs. 14, 24, 28, 32) 11
    Anterior epigynal margin relatively narrow (figs. 36, 40, 42, 44, 48, 52) 14
11. Epigynum with distinct median septum (fig. 28) . . . . . *bidentatus*
    Epigynum without distinct median septum 12
12. Anterior epigynal margin deeply invaginated at middle (figs. 14, 24) 13

Anterior epigynal margin not deeply invaginated at middle (figs. 20, 32) . . . . . *machupicchu*

13. Anterolateral corners of epigynum relatively wide (fig. 14) . . . . . *sericeus*
    Anterolateral corners of epigynum relatively narrow (fig. 24). . . . . *cingulipes*
14. Epigynal openings closer to base than to anterior margin (figs. 36, 40, 42) 15
    Epigynal openings closer to anterior margin than to base (figs. 44, 48, 52) 17
15. Epigynal openings connected (fig. 36). . . . . *keyserlingi*
    Epigynal openings not connected (figs. 40, 42). 16
16. Basal lobes of spermathecae relatively long (fig. 41). . . . . *gracilis*
    Basal lobes of spermathecae relatively short (fig. 43). . . . . *aemulatus*
17. Anterior epigynal margin straight (fig. 52) . . . . . *ignacio*
    Anterior epigynal margin invaginated at middle (figs. 44, 48). 18
18. Basal lobes of spermathecae widest at tip (fig. 49). . . . . *bicolor*
    Basal lobes of spermathecae widest behind tip (fig. 45) . . . . . *magdalena*

Trachelopachys sericeus (Simon)
Figures 12-17

Trachelas sericeus Simon, 1886, p. 568, fig. 6 (male holotype from unknown locality somewhere between Santa Cruz, Santa Cruz, Argentina, and Punta Arenas, Magallanes, Chile, should be in MNHN, lost).

Trachelopachys sericeus: Simon, 1897, p. 185, fig. 179. Tullgren, 1901, p. 248, pl. 5, figs. 5a, 5b. Roewer, 1954, p. 591. Bonnet, 1959, p. 4674.

Diagnosis. *Trachelopachys sericeus* is closest to *T. cingulipes* but may be distinguished by the short proximal flange of the bifid embolus (figs. 12, 16) and the more basally situated openings and wider anterolateral corners of the epigynum (fig. 14).

Male. Total length 5.13±0.49 mm. Carapace 2.40±0.29 mm. long, 2.01±0.26 mm. wide. Femur II 1.80±0.22 mm. long (14 specimens examined). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.12, PME 0.12, PLE 0.11; AME-AME 0.16, AME-ALE 0.05, PME-PME 0.18, PME-PLE 0.17, ALE-PLE 0.24. MOQ length 0.35 mm., front width 0.40 mm., back width 0.43 mm. Embolus bifid, with thick distal and thin proximal flanges (figs. 12, 16). Retrolateral tibial apophysis distal, shifted dorsally (fig. 13), horizontally bifid (fig. 17). Basal one-seventh of femur I darkened; femora II-IV with median, tibiae with proximal, and metatarsi with proximal and distal dark bands. Leg cusps: tibiae I 0-3, II 0; metatarsi I 4-19, II 3-7; tarsi I 3-9, II 1-6.

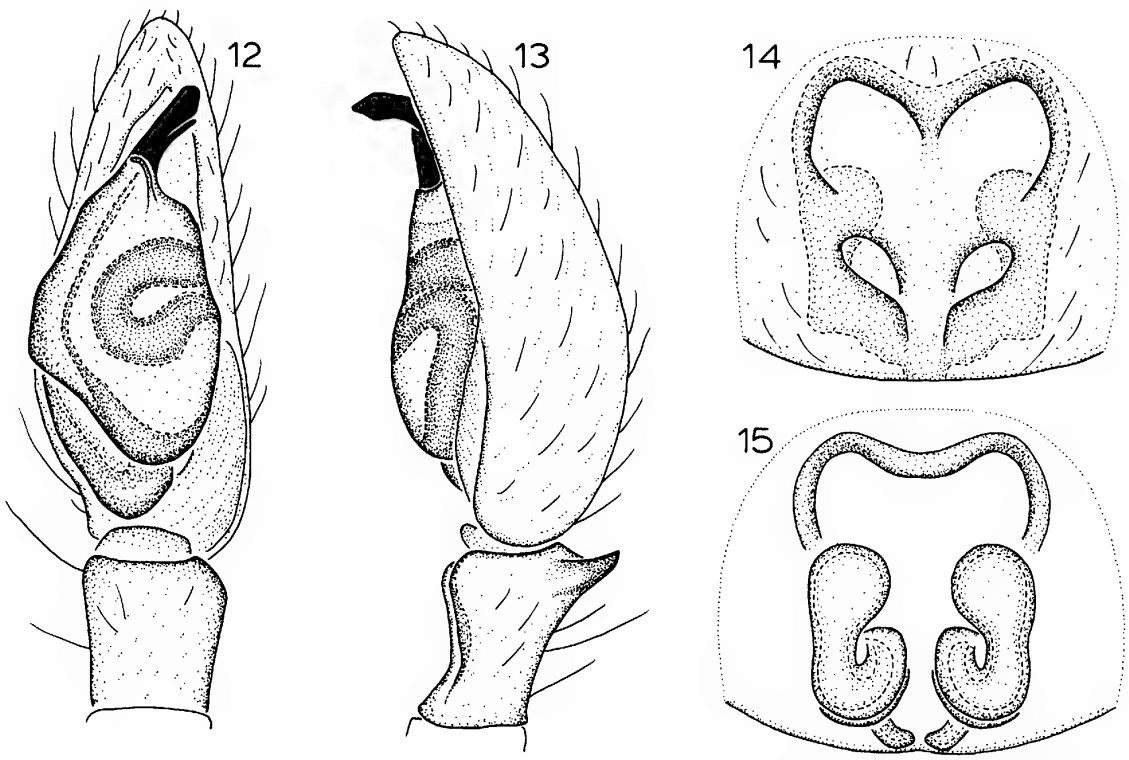
Female. Total length 5.39-6.40 mm. Carapace 2.45-2.93 mm. long, 2.13-2.48 mm. wide. Femur II 1.75-2.12 mm. long (five specimens). Eye sizes and interdistances (mm.): AME 0.16, ALE 0.14, PME 0.12, PLE 0.13; AME-AME 0.12, AME-ALE 0.08, PME-PME 0.26, PME-PLE 0.27, ALE-PLE 0.28. MOQ length 0.42 mm., front width 0.44 mm., back width 0.50 mm. Anterior epigynal margin invaginated medially (fig. 14). Spermathecae nearly covering basal lobes in dorsal view (fig. 15). Leg coloration as in male. Leg cusps: tibiae I 0 or 1, II 0; metatarsi I 4-15, II 3-8; tarsi I 1-10, II 1-7.

Material Examined. **Argentina**: *Buenos Aires*: Carmen de Patagones, Nov., 1971 (Aguilera, MACN), 1♀. *Chubut*: Cushamen, Aug. 14, 1966 (A. Kovacs, AMNH), 1♂; Epuylu, June 12, 1962 (A. Kovacs, AMNH), 2♂; Aug. 2, 1962 (A. Kovacs, AMNH), 1♂. *Entre Ríos*: Gualeguay, Apr. 16, 1943 (H. Rossi, MACN), 1♂. *Jujuy*: 10 km. S Yuto, May 5, 1964 (C. E. and E. S. Ross, CAS), 1♀. *Río Negro*: Ñorquincó, July 3, 1966 (A. Kovacs, AMNH), 4♂. *Santa Cruz*: Santa Cruz, Nov. 14, 1895 (O. Nordenskjöld, NRS), 4♂. **Brazil**: *Paraíba*: "Independência" (=Guarabira), 1911 (W. M. Mann, MCZ), 1♂, 1♀. **Paraguay**: *Caraguatay*: San Bernardino (E. Reimoser, MCZ), 2♀.

Distribution. Eastern Brazil, Paraguay, and Argentina (fig. 10). The Brazilian population may be isolated from the Argentinean and Paraguayan population; Short (1975, p. 337) listed no fewer than 15 species of birds with similarly disjunct distributions in the South American chaco and Brazilian caatinga regions.

Trachelopachys cingulipes (Simon)
Figures 22-25

Trachelas cingulipes Simon, 1886, p. 569 (one male and two female syntypes from Buenos



FIGS. 12-15. *Trachelopachys sericeus* (Simon). 12. Palp, ventral view. 13. Palp, retrolateral view. 14. Epigynum, ventral view. 15. Vulva, dorsal view.

Aires, Buenos Aires, Argentina, in MNHN, examined).

Trachelopachys cingulipes: Simon, 1897, p. 181. Roewer, 1954, p. 590. Bonnet, 1959, p. 4673.

Trachelopachys albicans Mello-Leitão, 1944, p. 354, fig. 44 (male holotype from Buenos Aires, Buenos Aires, Argentina, in MLP, examined). Roewer, 1954, p. 590. NEW SYNONYMY.

Diagnosis. Trachelopachys cingulipes is closest to *T. sericeus* but may be distinguished by the long proximal flange of the bifid embolus (fig. 22) and the more anteriorly situated epigynal openings and narrower anterolateral corners of the epigynum (fig. 24).

Male. Total length 5.37-5.87 mm. Carapace 2.43-2.62 mm. long, 2.12-2.45 mm. wide. Femur II 1.91-2.23 mm. long (five specimens). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.10, PME 0.11, PLE 0.10; AME-AME 0.13, AME-ALE 0.09, PME-PME 0.18, PME-PLE 0.25, ALE-PLE 0.26. MOQ length 0.36 mm., front width 0.36 mm., back width 0.40 mm. Embolus bifid, with long proximal flange (fig. 22). Retrolateral tibial apophysis distal, extremely long (fig. 23). Leg coloration as in male *sericeus*. Leg cusps: tibiae I 0, II 0; metatarsi I 7-17, II 6-13; tarsi I 6-11, II 6-9.

Female. Total length 7.06±0.81 mm. Carapace 3.17±0.31 mm. long, 2.78±0.24 mm. wide. Femur II 2.18±0.23 mm. long (13 specimens examined). Eye sizes and interdistances (mm.): AME 0.11, ALE 0.12, PME 0.11, PLE 0.12; AME-AME 0.15, AME-ALE 0.08, PME-PME 0.22, PME-PLE 0.26, ALE-PLE 0.24. MOQ length 0.37 mm., front width 0.37 mm., back width 0.44 mm. Epigynal openings situated medially; anterior epigynal margin invaginated medially (fig. 24). Basal spermathecal lobes expanded at tip (fig. 25). Leg coloration as in male *sericeus*. Leg cusps: tibiae I 0, II 0; metatarsi I 8-12, II 1-10; tarsi I 3-11, II 0-9.

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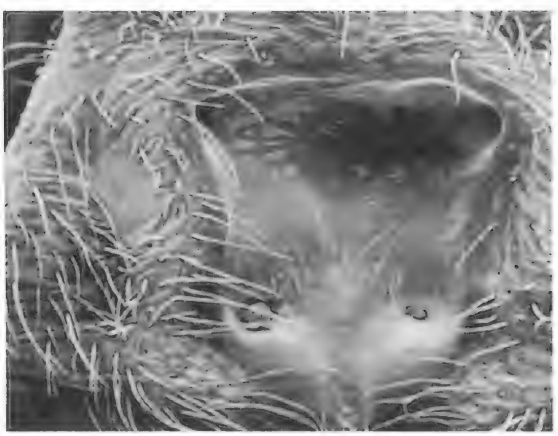

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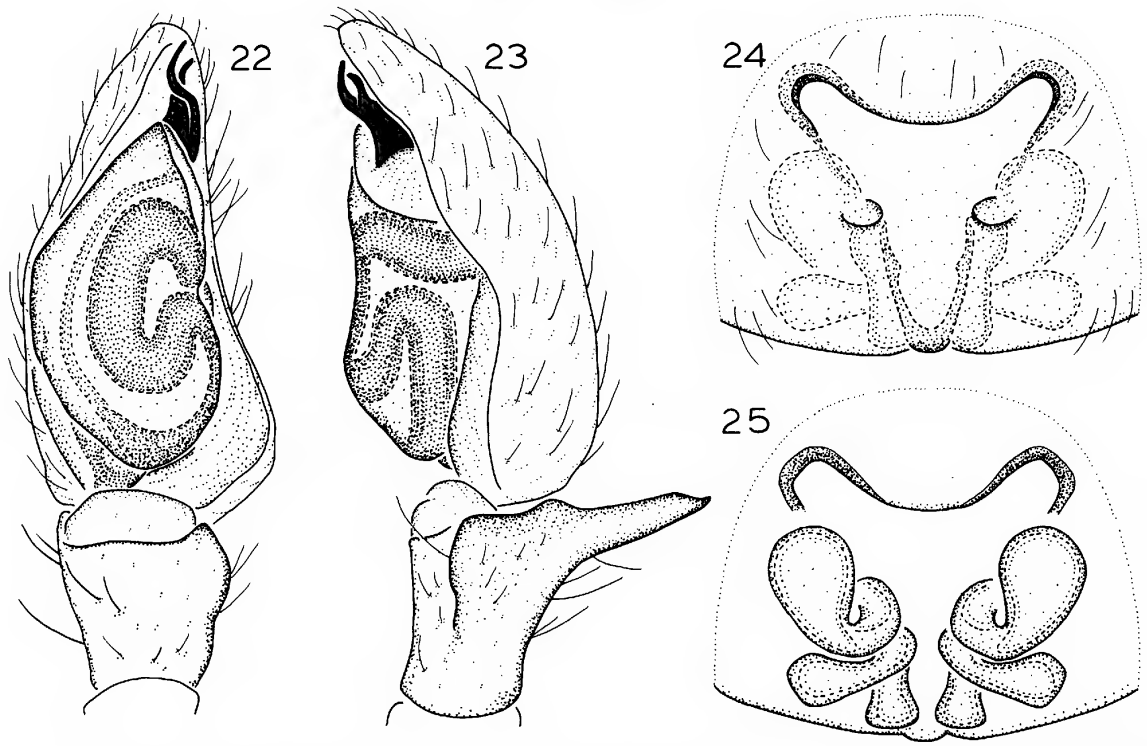
FIGS. 16-21. Scanning electron micrographs. 16, 17. *Trachelopachys sericeus* (Simon). 16. Embolus, ventral view, 260×. 17. Retrolateral tibial apophysis, dorsal view, 650×. 18-21. *T. machupicchu*, new species. 18. Embolus, ventral view, 260×. 19. Retrolateral tibial apophysis, dorsal view, 650×. 20. Epigynum, ventral view, 100×. 21. Vulva, dorsal view, 100×.



FIGS. 22-25. *Trachelopachys cingulipes* (Simon). 22. Palp, ventral view. 23. Palp, retrolateral view. 24. Epigynum, ventral view. 25. Vulva, dorsal view.

Material Examined. **Argentina**: *Buenos Aires*: Bella Vista, Jan., 1966 (J. M. Gallardo, MACN), 2♀; Buenos Aires (Prosen, MLP), 1♂, (C. Berg, MNHN), 1♂, 2♀; Parque Pepeyra, Apr., 1961 (Nunez, MACN), 1♂, 2♀; Punta Lara (M. Birabén, BMNH), 2♂, 1♀; Tandil, Cerro la Cascada, Apr., 1972 (Cesari, MACN), 1♀. *Entre Ríos*: Gualeguay, May 26, 1943 (H. Rossi, MACN), 2♀. *Misiones*: Santa María, Dec., 1947 (J. M. Viana, MACN), 1♀.

Distribution. Northeastern Argentina (fig. 10).

Synonymy. No genitalic differences were detected between the types of *cingulipes* and *albicans*.

Trachelopachys tarma, new species
Figures 26, 27

Type. Male holotype from 13 miles east of Tarma, Junín, Peru (December 31, 1954; E. I. Schlinger and E. S. Ross), deposited in CAS.

Etymology. The specific name is a noun in apposition taken from the type locality.

Diagnosis. Trachelopachys tarma is closest to *T. machupicchu* but may be distinguished by the shorter retrolateral tibial apophysis (fig. 27) and by the basal coil of the palpal duct not being visible in ventral view (fig. 26).

Male. Total length 5.65 mm. Carapace 2.91 mm. long, 2.63 mm. wide. Femur II 2.30 mm. long (holotype). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.09, PME 0.10, PLE 0.11; AME-AME 0.12, AME-ALE 0.09, PME-PME 0.21, PME-PLE 0.24, ALE-PLE 0.26. MOQ length 0.40 mm., front width 0.36 mm., back width 0.41 mm. Embolus entire, recessed behind wide conductor (fig. 26). Retrolateral tibial apophysis distal, short (fig. 27). Base of femur I only slightly darkened, other leg bands absent. Leg cusps: tibiae I 0, II 0; metatarsi I 7-11, II 3-5; tarsi I 8-13, II 7 or 8.

Female. Unknown.

Material Examined. Only the holotype.
Distribution. Central Peru (fig. 10).

Trachelopachys machupicchu, new species
Figures 18-21, 30-33

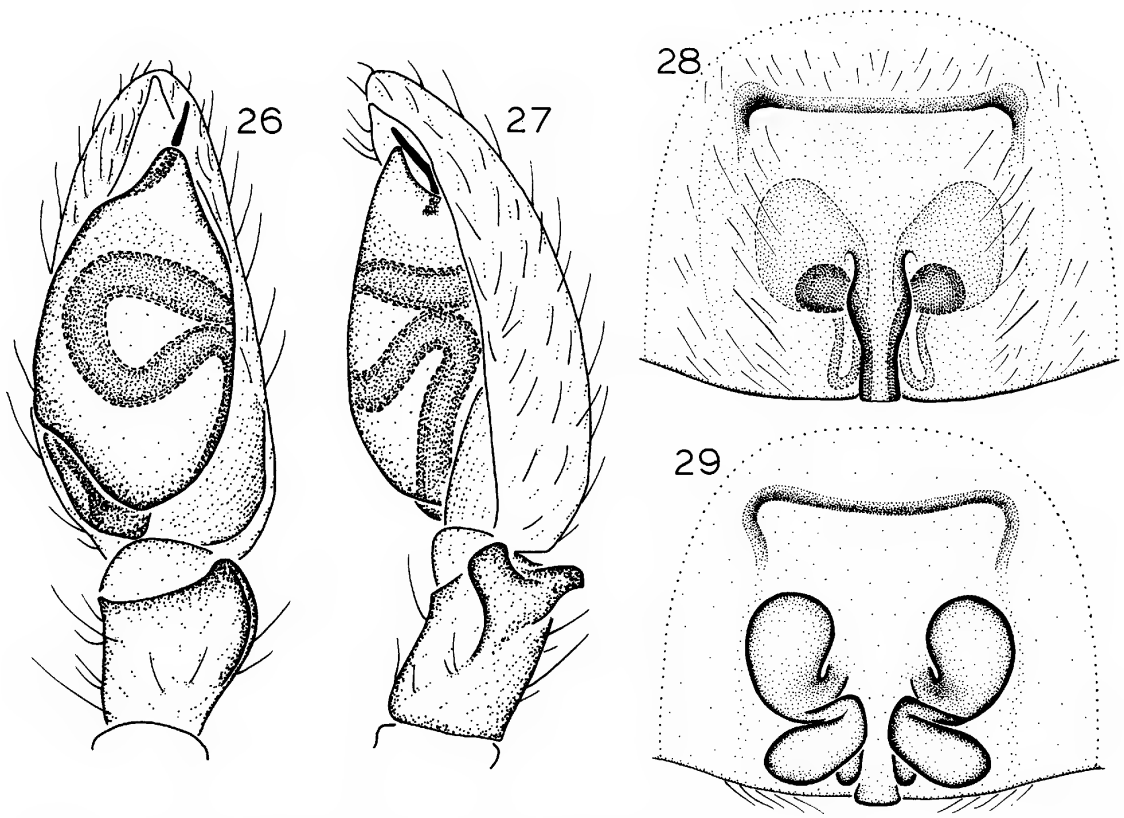
Types. Male holotype and female allotype from Machupicchu, Cusco, Peru (February 20, 1947; J. C. Pallister), deposited in AMNH.

Etymology. The specific name is a noun in apposition taken from the type locality.

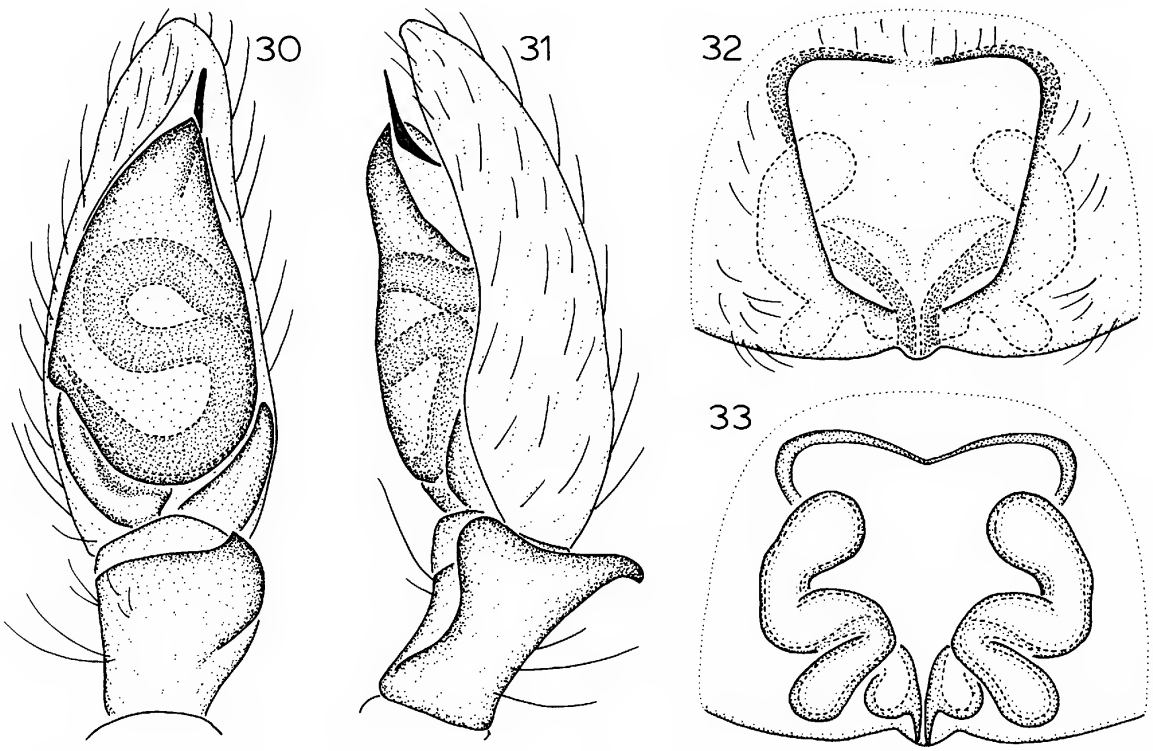
Diagnosis. Trachelopachys machupicchu is closest to *T. tarma* but may be distinguished by the longer retrolateral tibial apophysis (fig. 31) and the presence of long lateral epigynal margins (figs. 20, 32).

Male. Total length 5.26-6.23 mm. Carapace 2.74-3.20 mm. long, 2.45-2.86 mm. wide. Femur II 2.41-2.74 mm. long (four specimens). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.12, PME 0.12, PLE 0.12; AME-AME 0.12, AME-ALE 0.10, PME-PME 0.24, PME-PLE 0.28, ALE-PLE 0.27. MOQ length 0.42 mm., front width 0.36 mm., back width 0.48 mm. Basal coil of palpal duct visible in ventral view (fig. 30). Retrolateral tibial apophysis distal, shifted dorsally, slightly prolonged laterally (figs. 19, 31). Basal four-fifths of femur I darkened. Leg cusps: tibiae I 0, II 0; metatarsi I 6-14, II 2-9; tarsi I 3-7, II 0-6.

Female. Total length 8.04±0.39 mm. Carapace 3.50±0.26 mm. long, 3.15±0.19 mm. wide. Femur II 2.92±0.12 mm. long (16 specimens examined). Eye sizes and interdistances (mm.): AME 0.13, ALE 0.11, PME 0.14, PLE 0.12; AME-AME 0.15, AME-ALE 0.12, PME-PME 0.27, PME-PLE 0.35, ALE-PLE 0.39. MOQ length 0.49 mm., front width 0.41 mm., back



FIGS. 26-29. 26, 27. *Trachelopachys tarma*, new species. 26. Palp, ventral view. 27. Palp, retrolateral view. 28, 29. *T. bidentatus* Tullgren. 28. Epigynum, ventral view. 29. Vulva, dorsal view.



FIGS. 30-33. *Trachelopachys machupicchu*, new species. 30. Palp, ventral view. 31. Palp, retrolateral view. 32. Epigynum, ventral view. 33. Vulva, dorsal view.

width 0.55 mm. Epigynum with long lateral margins (figs. 20, 32). Spermathecae elongate (figs. 21, 33). Leg coloration as in male. Leg cusps: tibiae I 0, II 0; metatarsi I 2-12, II 1-6; tarsi I 2-5, II 0-3.

Material Examined. **Peru**: *Cusco*: Machupicchu, May, 1942 (F. Putlitz, EPC), 2♀; Feb. 20, 1947 (J. C. Pallister, AMNH), 2♂, 2♀; Mar. 6, 1947, elevation 9200 feet (J. C. Pallister, AMNH), 1♀; Mar. 20-22, 1947, elevation 6500 feet (J. C. Pallister, AMNH), 4♀; Feb. 19, 1965, among ruins, elevation 6900 feet (H. W. Levi, MCZ), 2♀; Apr., 1965, on rocks (R. F. Legner, MCZ), 1♀; Feb. 28-Mar. 1, 1967, elevation 8550-9200 feet (W. L. Brown, MCZ), 1♀; Jan. 24, 1973, on ground and walls (A. Moreton, MCZ), 1♀; road up Machupicchu, Feb. 20, 1965, elevation 6900 feet (H. W. Levi, MCZ), 2♀; Urubama River, forest near Machupicchu, Feb. 20, 1965 (H. W. Levi, MCZ), 2♂.

Distribution. Cusco, Peru (fig. 10).

Natural History. One female was captured with an elongate egg case containing 19 brownish eggs 0.85 mm. in diameter.

Trachelopachys bidentatus Tullgren
Figures 28, 29

Trachelopachys bidentatus Tullgren, 1905, p. 49, figs. 23a, 23b (male holotype from Tatarenda, Santa Cruz, Bolivia, should be in NRS, lost). Roewer, 1954, p. 590. Bonnet, 1959, p. 4673.

Diagnosis. Trachelopachys bidentatus is a distinctive species. No males have been available for study, but Tullgren's description and illustrations indicate that there are two retrolateral tibial apophyses, a character shown by no other species. Similarly, the female (also from Bolivia) here associated with the species has a long, distinct median epigynal septum (fig. 28) found in no other form.

Male. Unavailable; described by Tullgren (1905).

Female. Total length 7.63 mm. Carapace 3.62

mm. long, 3.10 mm. wide. Femur II 2.77 mm. long (one specimen). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.13, PME 0.10, PLE 0.13; AME-AME 0.18, AME-ALE 0.14, PME-PME 0.31, PME-PLE 0.36, ALE-PLE 0.34. MOQ length 0.44 mm., front width 0.42 mm., back width 0.51 mm. Epigynum with long, distinct median septum (fig. 28). Spermathecae globose (fig. 29). All coxae and basal two-thirds of femora I and II darkened. Leg cusps: tibiae I 0, II 0; metatarsi I 8-10, II 6-8; tarsi I 3 or 4, II 3 or 4.

Material Examined. **Bolivia**: *La Paz*: Yungas area, elevation 6500 feet (MNHN), 1♀.

Distribution. Bolivia (fig. 10).

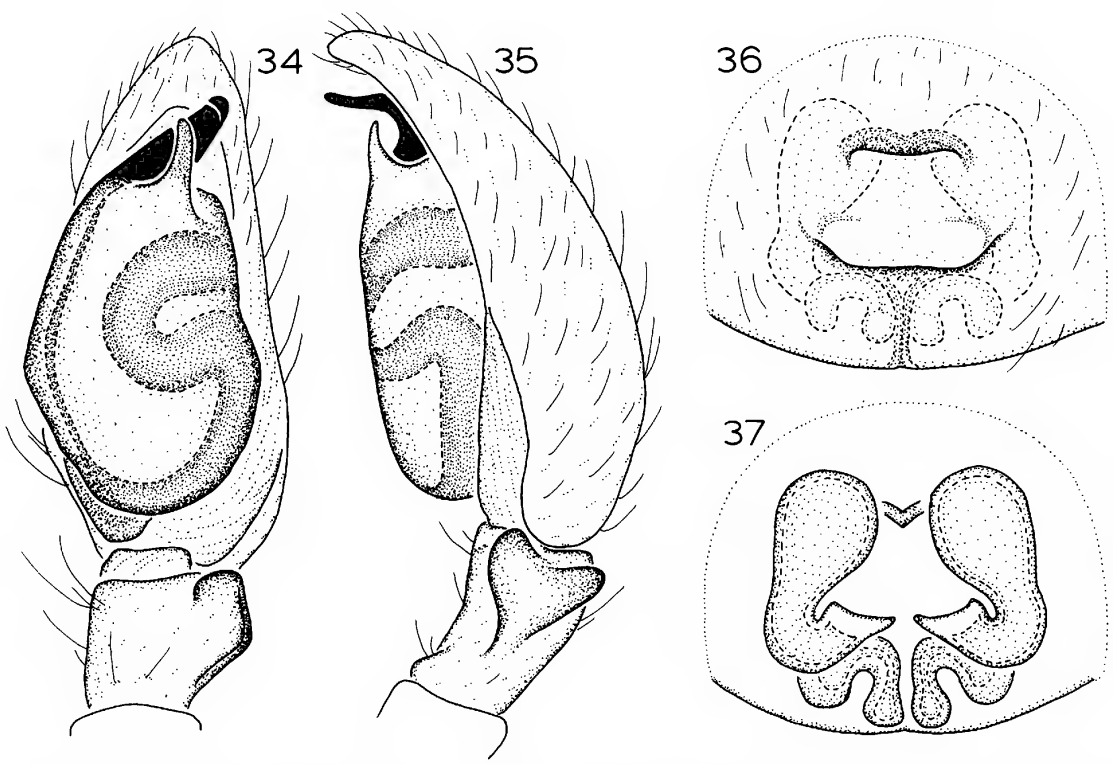
Trachelopachys keyserlingi (Roewer)
new combination
Figures 34-37

Trachelas flavipes Keyserling, 1891, p. 59, figs. 31, 31a (one male and two female syntypes from Rio Grande, Rio Grande do Sul, Brazil, in BMNH, examined; preoccupied in *Trachelas* by *T. flavipes* L. Koch, 1882). Bonnet, 1959, p. 4667.

Trachelas keyserlingi Roewer, 1951, p. 446 (*nomen novum* for *Trachelas flavipes* Keyserling); 1954, p. 587.

Diagnosis. Trachelopachys keyserlingi is closest to *T. gracilis* but may be distinguished by the wider embolus (fig. 34) and connected epigynal openings (fig. 36).

Male. Total length 4.10, 4.46 mm. Carapace 1.84, 2.05 mm. long, 1.69, 1.84 mm. wide. Femur II 1.46, 1.76 mm. long (two specimens). Eye sizes and interdistances (mm.): AME 0.10, ALE 0.10, PME 0.11, PLE 0.10; AME-AME 0.09, AME-ALE 0.05, PME-PME 0.18, PME-PLE 0.19, ALE-PLE 0.18. MOQ length 0.31 mm., front width 0.30 mm., back width 0.40 mm. Embolus wide, with recurved tip (fig. 34). Retrolateral tibial apophysis short, subdistal (fig. 35). Legs without dark markings. Leg cusps: tibiae I



FIGS. 34-37. *Trachelopachys keyserlingi* (Roewer). 34. Palp, ventral view. 35. Palp, retrolateral view. 36. Epigynum, ventral view. 37. Vulva, dorsal view.

0, II 0 or 1; metatarsi I 9-12, II 6-8; tarsi I 6-13, II 4-6.

Female. Total length 4.07-5.75 mm. Carapace 1.76-2.23 mm. long, 1.66-1.98 mm. wide. Femur II 1.33-1.68 mm. long (six specimens). Eye sizes and interdistances (mm.): AME 0.10, ALE 0.09, PME 0.10, PLE 0.11; AME-AME 0.12, AME-ALE 0.04, PME-PME 0.20, PME-PLE 0.17, ALE-PLE 0.17. MOQ length 0.32 mm., front width 0.32 mm., back width 0.40 mm. Epigynal openings connected transversely (fig. 36). Basal lobes of spermathecae semicircular (fig. 37). Leg coloration as in male. Leg cusps: tibiae I 0, II 0; metatarsi I 0-2, II 0; tarsi I 0-2, II 0 or 1.

Material Examined. **Argentina**: *Misiones*: Eldorado, Sept. 1-Nov. 15, 1964 (A. Kovacs, AMNH), 1♀. *Río Negro*: El Bolsón, 1965-1966 (A. Kovacs, AMNH), 1♀. **Brazil**: *Rio Grande do Sul*: Pelotas, Mar., 1955 (C. Biezanko, AMNH), 1♂; Nov., 1960 (C. Biezanko, AMNH), 1♀; Rio Grande (Ihering, BMNH), 1♂, 2♀. **Paraguay**: *Caraguatay*: San Bernardino (E. Reimoser, MCZ), 1♀.

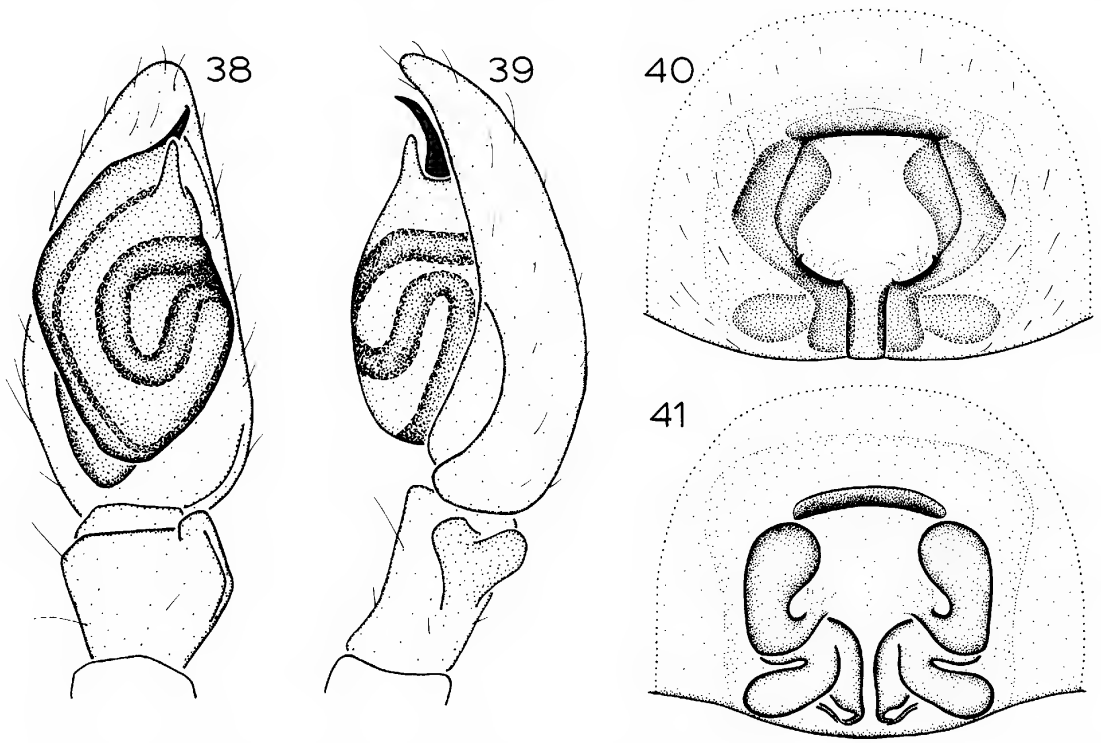
Distribution. Argentina, Paraguay, and southeastern Brazil (fig. 11).

Trachelopachys gracilis (Keyserling)
new combination
Figures 38-41

Trachelas gracilis Keyserling, 1891, p. 61, fig. 33 (male holotype from Blumenau, Santa Catarina, Brazil, in BMNH, examined). Roewer, 1954, p. 587. Bonnet, 1959, p. 4668.

Diagnosis. Trachelopachys gracilis is closest to *T. keyserlingi* but may be distinguished by the narrower embolus (fig. 38) and unconnected epigynal openings (fig. 40).

Male. Total length 4.30 mm. Carapace 1.92 mm. long, 1.62 mm. wide. Femur II 1.40 mm. long (holotype). Eye sizes and interdistances (mm.): AME 0.09, ALE 0.07, PME 0.08, PLE



FIGS. 38-41. *Trachelopachys gracilis* (Keyserling). 38. Palp, ventral view. 39. Palp, retrolateral view. 40. Epigynum, ventral view. 41. Vulva, dorsal view.

0.10; AME-AME 0.09, AME-ALE 0.05, PME-PME 0.16, PME-PLE 0.16, ALE-PLE 0.13. MOQ length 0.31 mm., front width 0.27 mm., back width 0.31 mm. Embolus narrow, with recurved tip (fig. 38). Retrolateral tibial apophysis rounded, subdistal (fig. 39). Femur I and proximal four-fifths of tibia I darkened; tibia II with basal dark band. Leg cusps: tibiae I 2, II 0; metatarsi I 6-8, II 5-7; tarsi I 6, II 2.

Female. Total length 6.46, 6.73 mm. Carapace 2.73, 2.95 mm. long, 2.45, 2.56 mm. wide. Femur II 2.16, 2.34 mm. long (two specimens). Eye sizes and interdistances (mm.): AME 0.10, ALE 0.09, PME 0.09, PLE 0.12; AME-AME 0.12, AME-ALE 0.06, PME-PME 0.21, PME-PLE 0.23, ALE-PLE 0.19. MOQ length 0.37 mm., front width 0.32 mm., back width 0.39 mm. Epigynal openings not connected transversely (fig. 40). Spermathecae with long basal lobes (fig. 41). Femur I completely darkened; other leg segments without dark markings. Leg cusps absent.

Material Examined. **Brazil**: *Bahia*: "S. Antonio da Barra" (=Condeúba, according to Levi, 1964; E. Gounelle, MNHN), 2♀. *Santa Catarina*: Blumenau (Hetschko, BMNH), 1♂.

Distribution. Eastern Brazil (fig. 11).

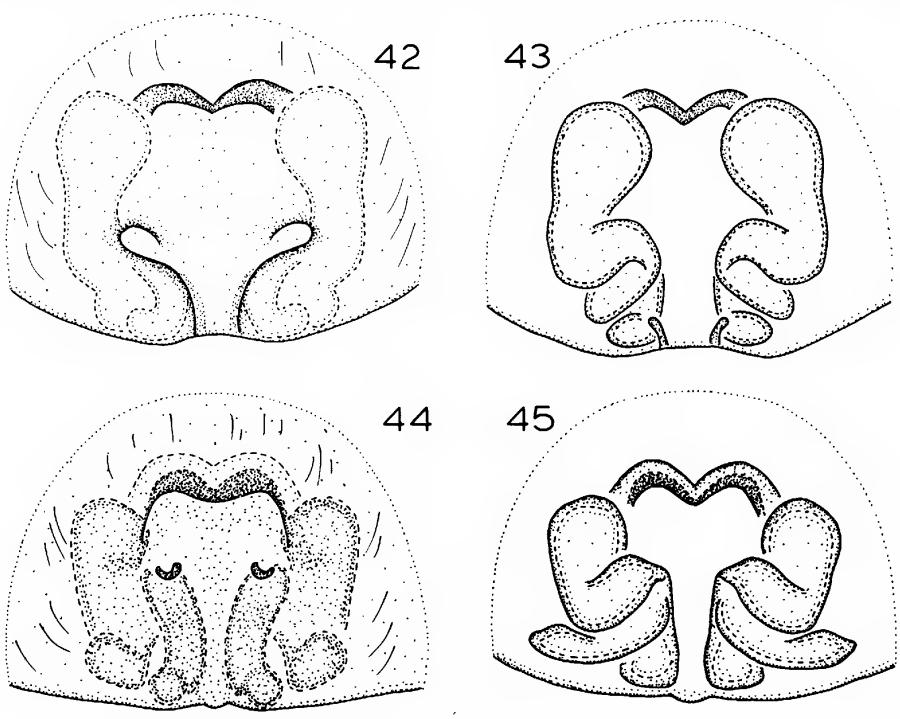
Trachelopachys aemulatus Gertsch
Figures 42, 43

Trachelopachys aemulatus Gertsch, 1942, p. 11, fig. 33 (female holotype from Apa, Concepción, Paraguay, in AMNH, examined). Roewer, 1954, p. 590.

Diagnosis. Trachelopachys aemulatus is closest to *T. keyserlingi* and *T. gracilis* but may be distinguished by the sinuous epigynal openings (fig. 42).

Male. Unknown.

Female. Total length 4.25, 5.54 mm. Carapace 1.91, 2.16 mm. long, 1.69, 2.02 mm. wide. Femur II 1.44, 1.62 mm. long (two specimens).



FIGS. 42-45. 42, 43. *Trachelopachys aemulatus* Gertsch. 42. Epigynum, ventral view. 43. Vulva, dorsal view. 44, 45. *T. magdalena*, new species. 44. Epigynum, ventral view. 45. Vulva, dorsal view.

Eye sizes and interdistances (mm.): AME 0.11, ALE 0.10, PME 0.09, PLE 0.11; AME-AME 0.09, AME-ALE 0.04, PME-PME 0.16, PME-PLE 0.15, ALE-PLE 0.15. MOQ length 0.29 mm., front width 0.31 mm., back width 0.34 mm. Epigynal openings long, sinuous (fig. 42). Basal lobes of spermathecae short (fig. 43). Legs without dark markings. Leg cusps absent.

Material Examined. **Paraguay**: *Concepción*: Apa, Jan.-Feb., 1909 (AMNH), 2♀.

Distribution. Concepción, Paraguay (fig. 11).

Trachelopachys magdalena, new species
Figures 44, 45

Type. Female holotype from Río Frío, Magdalena, Colombia (July 2, 1929; G. Salt), deposited in MCZ).

Etymology. The specific name is a noun in apposition taken from the type locality.

Diagnosis. Trachelopachys magdalena is closest to *T. bicolor* but may be distinguished by the longer anterior epigynal margin (fig. 44).

Male. Unknown.

Female. Total length 7.06 mm. Carapace 2.86 mm. long, 2.34 mm. wide. Femur II 1.91 mm. long (holotype). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.10, PME 0.11, PLE 0.11; AME-AME 0.12, AME-ALE 0.09, PME-PME 0.23, PME-PLE 0.29, ALE-PLE 0.29. MOQ length 0.42 mm., front width 0.36 mm., back width 0.55 mm. Anterior epigynal margin elongated laterally (fig. 44). Basal lobes of spermathecae widest behind tip (fig. 45). Femur I darkened completely. Leg cusps absent.

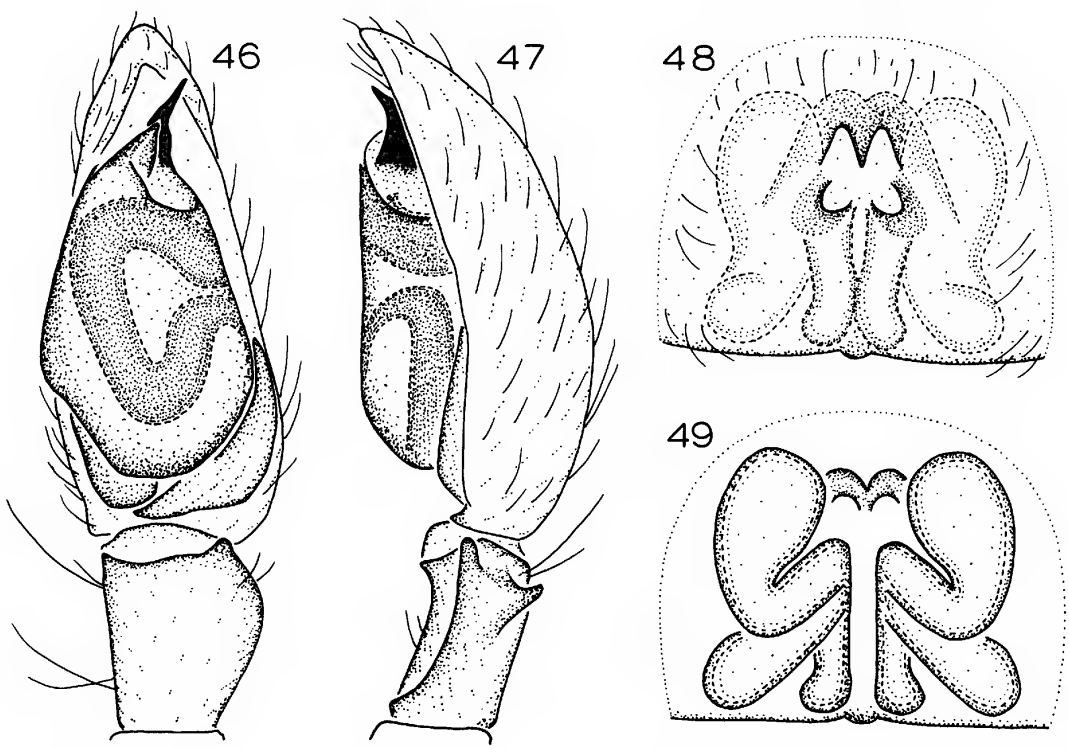
Material Examined. Only the holotype.

Distribution. Magdalena, Colombia (fig. 11).

Trachelopachys bicolor Chamberlin
Figures 46-49

Trachelopachys bicolor Chamberlin, 1916, p. 275, pl. 21, figs. 9, 10 (female holotype from Urubamba, Cusco, Peru, in MCZ, examined). Roewer, 1954, p. 590. Bonnet, 1959, p. 4673.

Diagnosis. Trachelopachys bicolor is closest



FIGS. 46-49. *Trachelopachys bicolor* Chamberlin. 46. Palp, ventral view. 47. Palp, retrolateral view. 48. Epigynum, ventral view. 49. Vulva, dorsal view.

to *T. magdalena* but may be distinguished by the triangular conductor (fig. 46) and the short, folded anterior epigynal margin (fig. 48).

Male. Total length 5.11-7.85 mm. Carapace 2.63-3.69 mm. long, 2.30-3.36 mm. wide. Femur II 2.12-3.64 mm. long (six specimens). Eye sizes and interdistances (mm.): AME 0.14, ALE 0.14, PME 0.14, PLE 0.14; AME-AME 0.14, AME-ALE 0.11, PME-PME 0.28, PME-PLE 0.25, ALE-PLE 0.43. MOQ length 0.46 mm., front width 0.42 mm., back width 0.54 mm. Conductor triangular, sharply pointed (fig. 46). Retrolateral tibial apophysis subdistal, hooklike (fig. 47). Basal one-sixth of femur I usually darkened. Leg cusps: tibiae I 0, II 0; metatarsi I 8-17, II 6-10; tarsi I 5-14, II 4-13.

Female. Total length 6.41-8.33 mm. Carapace 2.51-3.35 mm. long, 2.29-3.17 mm. wide. Femur II 1.62-2.63 mm. long (nine specimens). Eye sizes and interdistances (mm.): AME 0.10, ALE 0.11, PME 0.12, PLE 0.11; AME-AME 0.18, AME-ALE 0.14, PME-PME 0.25, PME-PLE 0.28, ALE-PLE 0.29. MOQ length 0.44 mm., front width 0.38 mm., back width 0.49 mm. Anterior epigynal margin short, folded (fig. 48). Spermathecae greatly enlarged (fig. 49). Tibiae often with proximal, metatarsi often with proximal and distal dark bands. Leg cusps: tibiae: I 0, II 0; metatarsi I 5-11, II 3-9; tarsi I 3-10, II 1-7.

Material Examined. **Bolivia**: *La Paz*: La Paz, elevation 8500 feet (MNHN), 1♀. **Peru**: *Apurímac*: 40 mi. E Abancay, Mar. 4, 1951 (Ross and Michelbacher, CAS), 1♂; 37 km. S Andahuaylas, Mar. 6, 1951 (Ross and Michelbacher, CAS), 3♀. *Cusco*: Ollantaytambo, July, 1911, elevation 9000 feet (MCZ), 1♀; Urubamba, July, 1911, elevation 9500 feet, under stone (MCZ), 2♀; Jan. 26, 1965, under stone (F. Carrasco, MCZ), 1♂, 1♀; Feb. 18, 1965, elevation 9200 feet, moist field (F. Carrasco, MCZ), 4♀. *Puno*: 20 mi. N Desaguadero, Feb. 27, 1951 (Ross and Michelbacher, CAS), 1♀.

Distribution. Peru and western Bolivia (fig. 11).

Trachelopachys ignacio, new species
Figures 50-53

Types. Male holotype and female paratype from San Luis, San Ignacio, Paraguay (October, 1908), deposited in AMNH.

Etymology. The specific name is a noun in apposition taken from the type locality.

Diagnosis. Trachelopachys ignacio is closest to *T. magdalena* and *T. bicolor* but may be distinguished by the medially situated retrolateral tibial apophysis (fig. 51) and by the epigynal openings and anterior epigynal margin being connected (fig. 52).

Male. Total length 6.23 mm. Carapace 2.91 mm. long, 2.45 mm. wide. Femur II 1.89 mm. long (holotype). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.12, PME 0.09, PLE 0.11; AME-AME 0.16, AME-ALE 0.07, PME-PME 0.23, PME-PLE 0.26, ALE-PLE 0.26. MOQ length 0.38 mm., front width 0.40 mm., back width 0.41 mm. Embolus recessed behind thick conductor (fig. 50). Retrolateral tibial apophysis medially situated (fig. 51). Basal half of femur I darkened. Leg cusps: tibiae I 0, II 0; metatarsi I 7-11, II 5-7; tarsi I 7, II 6 or 7.

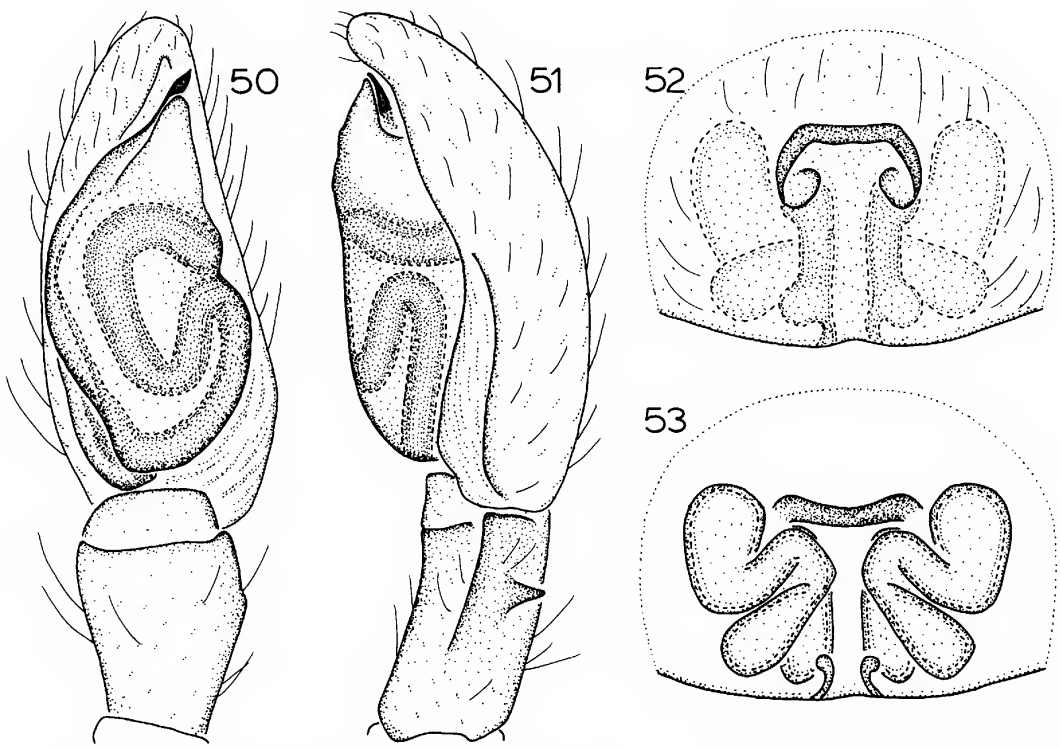
Female. Total length 6.59, 6.62 mm. Carapace 2.81, 3.06 mm. long, 2.30, 2.63 mm. wide. Femur II 1.80, 2.05 mm. long (two specimens). Eye sizes and interdistances (mm.): AME 0.11, ALE 0.13, PME 0.14, PLE 0.13; AME-AME 0.20, AME-ALE 0.11, PME-PME 0.27, PME-PLE 0.30, ALE-PLE 0.31. MOQ length 0.46 mm., front width 0.42 mm., back width 0.56 mm. Epigynal openings and anterior epigynal margin connected (fig. 52). Spermathecae recurved (fig. 53). Leg coloration as in male. Leg cusps: tibiae I 0, II 0; metatarsi I 3-7, II 0-4; tarsi I 6 or 7, II 2-4.

Material Examined. **Paraguay**: *Caraguatay*: San Bernardino (E. Reimoser, MCZ), 1♀.

Distribution. Paraguay (fig. 11).

SUPPLEMENT

After the manuscript of the present paper had been set in type, I received (through the courtesy of Dr. J. Racenis of the Museo de Biologia, Universidad Central de Venezuela, Caracas) the type specimens of the three Venezuelan tracheline spiders described by Caporiacco (1955). One of these, *Acanthoceto bryantae*, is well supplied with leg spines and is not a tracheline; Mello-Leitão (1944) originally placed *Acanthoceto* in the Corinninae and Caporiacco's description of *A. bryantae* as a tracheline appears to be a *lapsus* rather than an actual transfer of the



FIGS. 50-53. *Trachelopachys ignacio*, new species. 50. Palp, ventral view. 51. Palp, retrolateral view. 52. Epigynum, ventral view. 53. Vulva, dorsal view.

genus. The male described as *Meriola discolorifemur* and the female genotype of *Tetratrachelas singularis* are trachelines, however, and appear to be the male and female of a single species that actually belongs to *Trachelopachys*. For that reason, *Tetratrachelas* Caporiacco is here placed as a junior synonym of *Trachelopachys* (NEW SYNONYMY), and the Venezuelan species is redescribed below.

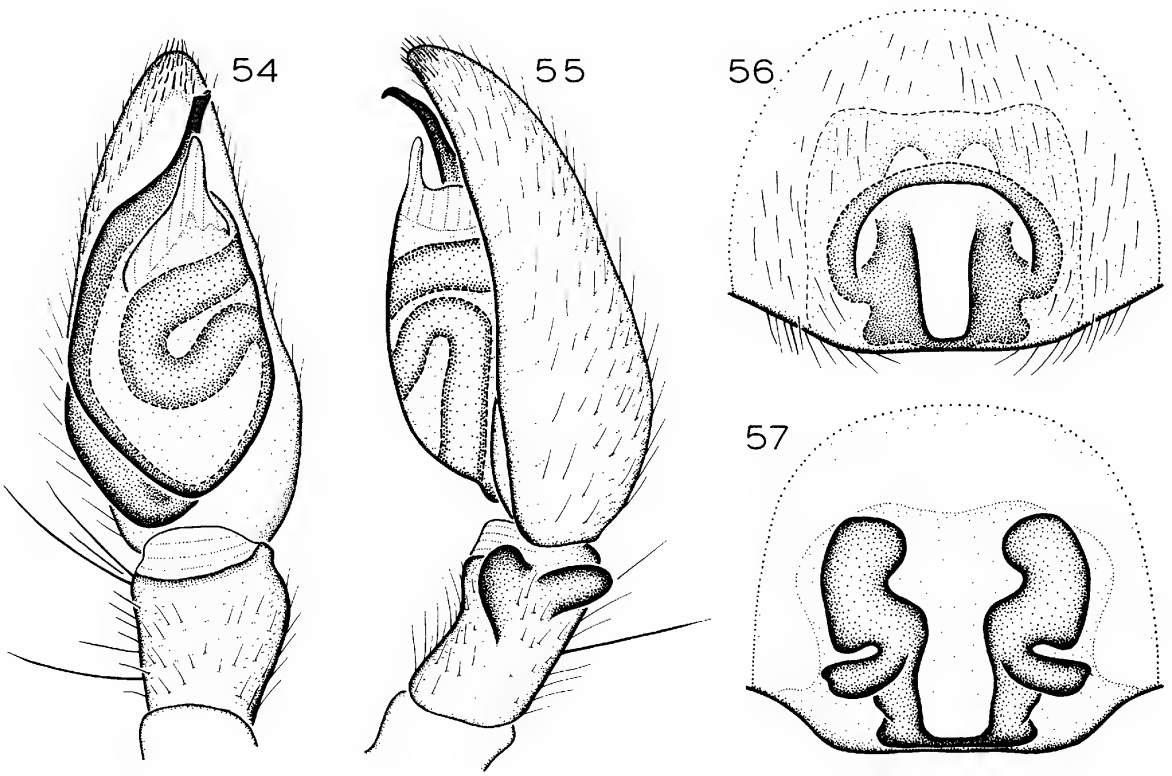
Trachelopachys singularis (Caporiacco)
new combination
Figures 54-57

Tetratrachelas singularis Caporiacco, 1955, p. 383, fig. 50 (female holotype from El Junquito, Distrito Federal, Venezuela, in Museo de Biologia, Caracas, examined).

Meriola discolorifemur Caporiacco, 1955, p. 381, fig. 48 (male holotype from Carúpano, Sucre, Venezuela, in Museo de Biologia, Caracas, examined). NEW SYNONYMY.

Diagnosis. Trachelopachys singularis will key out to *T. gracilis* in the key given above, and the following synapomorphic characters indicate that the two are sister species: retrolateral tibial apophysis rounded and situated below tip of tibia, embolus with recurved tip, and lateral epigynal arms long. The former species may be distinguished by the wider embolus (fig. 54) and more anteriorly situated basal lobes of the spermathecae (fig. 57).

Male. Total length 5.90 mm. Carapace 2.84 mm. long, 2.54 mm. wide. Femur II 2.27 mm. long (holotype). Eye sizes and interdistances (mm.): AME 0.09, ALE 0.09, PME 0.10, PLE 0.12; AME-AME 0.19, AME-ALE 0.08, PME-PME 0.25, PME-PLE 0.20, ALE-PLE 0.20. MOQ length 0.42 mm., front width 0.37 mm., back width 0.45 mm. Embolus with prolateral point and recurved tip (fig. 54). Retrolateral tibial apophysis subdistal, rounded (fig. 55). All of femur I and distal third of femur II darkened.



FIGS. 54-57. *Trachelopachys singularis* (Caporiacco). 54. Palp, ventral view. 55. Palp, retrolateral view. 56. Epigynum, ventral view. 57. Vulva, dorsal view.

Leg cusps: tibiae: I 0, II 0; metatarsi: I 3 or 4, II 0; tarsi: I 1, II 0.

Female. Total length 5.29 mm. Carapace 2.30 mm. long, 2.14 mm. wide. Femur II 1.91 mm. long (holotype). Eye sizes and interdistances (mm.): AME 0.12, ALE 0.11, PME 0.12, PLE 0.11; AME-AME 0.15, AME-ALE 0.09, PME-PME 0.24, PME-PLE 0.19, ALE-PLE 0.22. MOQ length 0.37 mm., front width 0.39 mm., back width 0.47 mm. Epigynum with long lateral arms surrounding depressed atrium (fig. 56). Basal lobes of spermathecae situated near midpoint of spermathecae (fig. 57). Leg coloration unknown (specimen in poor condition, apparently dried at some time). Leg cusps absent.

Material Examined. Only the holotypes.

Distribution. Northern Venezuela.

Placement and Synonymy. As indicated in figures 54-57, the genitalia of both *Meriola discolorifemur* and *Tetratrachelas singularis* fit the generic diagnosis of *Trachelopachys* given above. Since both sexes show close affinities with *Trachelopachys gracilis* and are from localities only about 200 miles apart, they are best considered conspecific until additional evidence indicates otherwise. As first reviser, I choose the name *singularis* as it refers to the type species of *Tetratrachelas.*

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